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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,505	08/18/2003	Mark D. Tracy	ASX-063	1681
42532	7590	03/18/2005	EXAMINER	
PROSKAUER ROSE LLP ONE INTERNATIONAL PLACE 14TH FL BOSTON, MA 02110			CUEVAS, PEDRO J	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

## Office Action Summary

Application No.

10/642,505

Applicant(s)

TRACY ET AL.

Examiner

Pedro J. Cuevas

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4, 8, &amp; 9 / 2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 7-11, 13-17, 22, 24-28, 30, and 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,358,573 B1 to Raoux et al.

Raoux et al. clearly teaches the design of a mixed frequency CVD process comprising:

receiving a plurality of fault status signals (3A) from a sputtering system (column 9, line 65 to column 15, line 3) within a period of time, simultaneously processed with the fault handling algorithm, and corresponding to one or more fault types;

processing the plurality of fault status signals with a fault-handling algorithm (column 14, lines 54-61);

generating at least one command signal (38) comprising a plurality of command signals, which are simultaneously generated by the processor for affecting operating characteristics of an RF power generator (5);

modifying operator specified parameters of the fault-handling algorithm during operation of the power generator without recompiling source code;

storing and retrieving the fault handling algorithm in a memory (86); and

a user interface (Figure 6) for modifying the fault-handling algorithm, the user interface in signal communication with the processor.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-6, 12, 18-20, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,358,573 B1 to Raoux et al. in view of U.S. Patent No. 5,424,691 A to Sadinsky.

Raoux et al. disclose the construction of the design of a mixed frequency CVD process as disclosed above.

However, it fails to disclose processing by performing linear algebra computations.

Sadinsky teach the construction of an apparatus and method for electronically controlled admittance matching network comprising:

processing by performing linear algebra computations and mathematical operations (Figure 4), selected from the group consisting of AND, OR, XOR, NOT, multiplication, addition, subtraction, division, equal to, greater than, less than, not equal to, greater than or equal to, less than or equal to, maximum, and minimum;

a generator is a DC power generator (Figure 8); and

having operating characteristics selected from the group consisting of system output disable, power block output disable, output enable prevent, and output drive rollback percentage;

Art Unit: 2834

for the purpose of providing a simple, cost effective structure for admittance matching, and permitting dynamic control under varying load conditions typical of semiconductor processing apparatus, and wholly electronic in nature.

It would have been obvious to one skilled in the art at the time the invention was made to use the apparatus and method for electronically controlled admittance matching network disclosed by Sadinsky and the mixed frequency CVD process disclosed by Raoux et al. for the purpose of providing a simple, cost effective structure for admittance matching, and permitting dynamic control under varying load conditions typical of semiconductor processing apparatus, and wholly electronic in nature.

5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,358,573 B1 to Raoux et al.

Raoux et al. disclose the construction of the design of a mixed frequency CVD process as disclosed above except for the processor being located in the power generator.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to localize the processor in the power generator, since it has been held that forming in one piece an article, which has formerly been formed in two pieces and put together, involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893). The term “integral” is sufficiently broad to embrace constructions united by such means as fastening and welding. *In re Hotte*, 177 USPQ 326, 328 (CCPA 1973).

6. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,358,573 B1 to Raoux et al. in view of U.S. Patent No. 5,198,746 A to Gyugyi et al.

Art Unit: 2834

Raoux et al. disclose the construction of the design of a mixed frequency CVD process as disclosed above.

However, it fails to disclose

Gyugyi et al. teach the construction of a transmission line dynamic impedance compensation system comprising a vector signal obtained by vector phase-locked tracker (96) for the purpose of tracking the angular rotation of the current vector.

It would have been obvious to one skilled in the art at the time the invention was made to use the vector signal generator disclosed by Gyugyi et al. on the mixed frequency CVD process disclosed by Raoux et al. for the purpose of tracking the angular rotation of a current vector.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (571) 272-2021. The examiner can normally be reached on M-F from 8:30 - 6:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2834

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pedro J. Cuevas  
March 7, 2005



**Nicholas Ponomarenko**  
**Primary Examiner**  
**Technology Center 2800**